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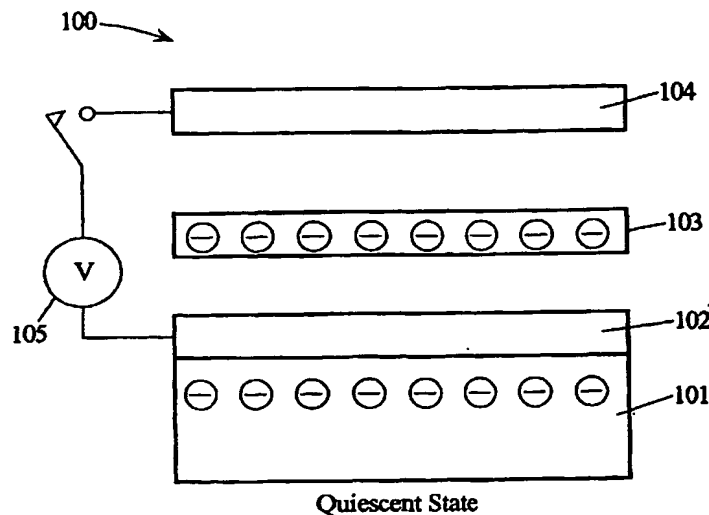
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[Continued on next page]

(54) Title: **DOUBLE-ELECTRET MEMS ACTUATOR**



(57) Abstract: An actuator (100) taking advantage of ponderomotive forces to enhance its electromechanical performance as a function of input energy. An actuator (100) may include a first conductive layer (102) residing on a first electret layer (101). The actuator (100) may further include a moveable second electret layer (103) which is spaced apart in relation to the first conductive layer (102) when the second electret layer (103) is in a quiescent state. The actuator (100) may further include a second conductive layer (104) in a spaced apart relation to the second electret layer (103) when the second electret layer (103) is in the quiescent state. The actuator (100) may further include a voltage source (105) configured to selectively apply a voltage between the first (102) and second (104) conductive layers thereby propelling the second electret layer (103) to either the first (102) or second (104) conductive layer.

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# INTERNATIONAL SEARCH REPORT

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G02B 26/00; G02B 26/08

US CL : 359/291, 292, 295, 223, 224

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 359/291, 292, 295, 223, 224

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
USPTO DATABASE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,188,772 B1 (Norris et al.) 13 February 2001 (13.02.2001) see entire reference.	1-13
Y		14-23

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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